Special Operations Forces

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Implementing the CMMI at the Special Operations Forces System Program Office

A Passion for Excellence

CMMI & SOF SPO

- **Laying the foundation**
- **Getting results**
- **Need to change**
- **Pilot assessment**
- **Moving forward**

WHY CHANGE?

- **There were no standardized ways to accomplish the SPO mission**

- **Cancelled Regulations/Guidelines = Lack of Documented Processes**

- **74% of SPO personnel wanted standardized processes**

- **Needed SPO Policies/Processes <u>That Work For Us</u>**

SPO's Goal

- **To establish a disciplined, consistent approach in developing and improving our acquisition and sustainment processes and to make continuous improvement a way of life in conducting business within the SPO**

STARTING OFF

- **Jun 1997--Conducted a Software Acquisition Capability Maturity Model (SA-CMM) Based Assessment For Internal Process Improvement**

- **Purpose--To Evaluate Current Acquisition Processes, To Identify Strengths & Weaknesses, And To Provide Direction For The Initiation Of Process Improvements**

WHY SA-CMM?

- **Model provides a disciplined , structured methodology**

- **Provides tools to both identify problems, and then solve them**

- **Model helps institute process improvement**

Establishing the Foundation

- **Developed an action plan**
- **Developed a charter**
- **Established an infrastructure**
- **Implemented the "Acquisition and Sustainment Process Improvement /Re-engineering Effort" (ASPIRE) as our program**

ASPIRE GOALS

- **Develop a disciplined, consistent approach to process improvement**

- **Perpetuate a knowledgeable / efficient acquisition organization providing "Value-Added" service to the Warfighter**

- **Have a process for continuous process improvement**

The SPO Plan

- **Our Infrastructure**
  - **Management Steering Group (MSG)** Chartered to Provide Management and Direction
  - **System Process Improvement Network (SPIN)** Chartered to Facilitate/Implement Process Improvement Program
  - **Process Action Teams (PAT)**s Formed to Define/Develop/Re-engineer Acquisition Processes

Systems Process Improvement Network (SPIN)

- **Program Managers of Process improvement**
- **Provide "Team" Training**
  - **Teambuilding**
  - **Process Definition**
  - **Project Planning**
- **Facilitate Process Improvement Meetings**
- **Provide Admin/Facilities Support to All ASPIRE Teams**

Process Action Teams (PAT)s

- **Define, develop, re-engineer processes**
- **Not "Fix-it" teams**
- **Real improvement the goal**
- **Composed of experienced, knowledgeable, skilled personnel from different career fields**
- **Approach breeds success**

THE LU PROCESS

MSG

IDENTIFY PROCESS	CHARTER PAT	ASSIGN PAT OWNER	REVIEW PROGRESS	ASSIGN PROCESS OWNER

SPIN

FACILITATE PAT	TRACK MAN-HRS	TRACK IMPLEMEN -TATION

PAT

RE-ENGINEER PROCESS	TRAIN WORKFORCE	RECOMMEND CLOSURE

PROCESS OWNER

MSG

IMPLEMENT PROCESS
IDENTIFY PROCESS CHANGES

THE LU PROCESS

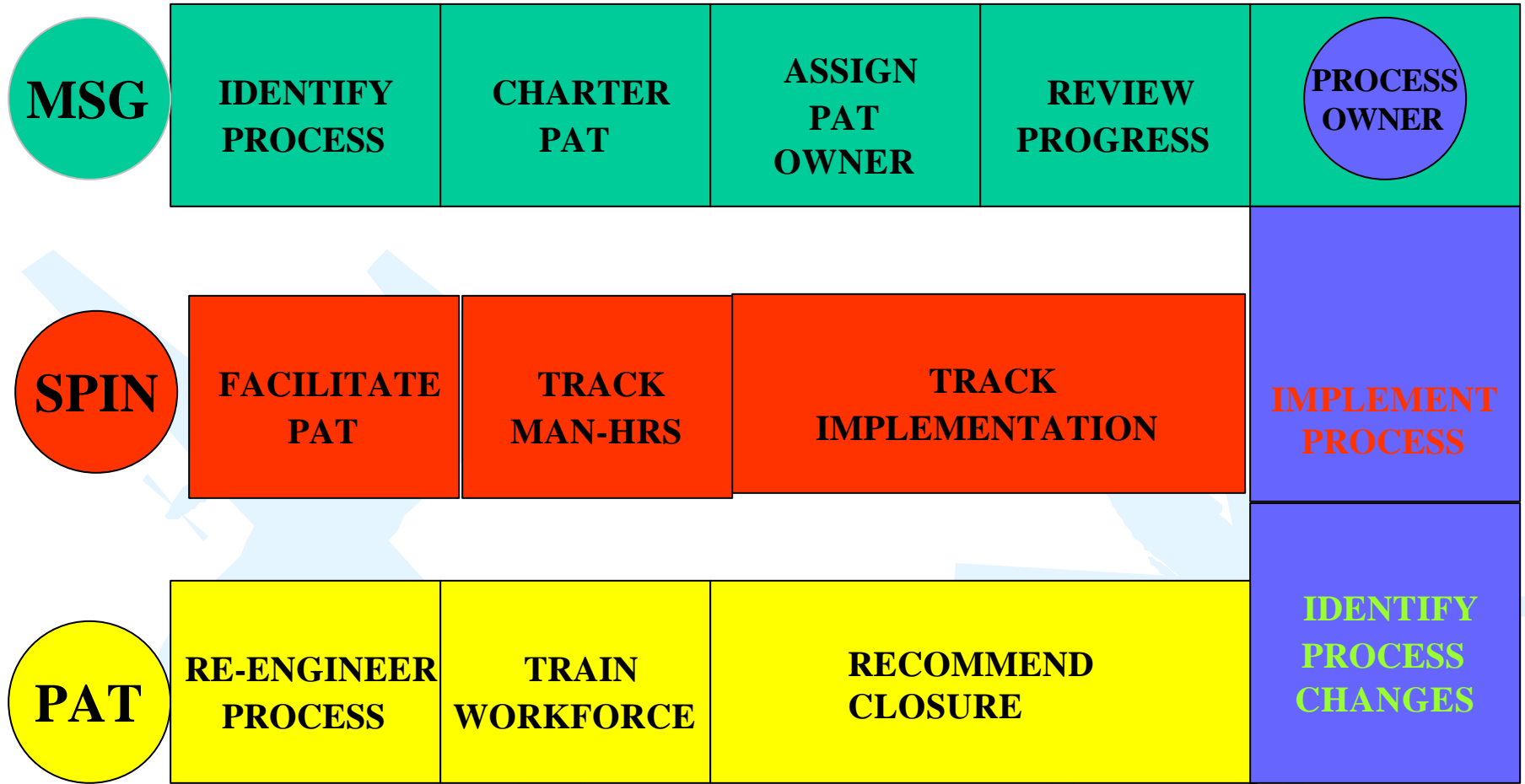| MSG	IDENTIFY PROCESS	CHARTER PAT	ASSIGN PAT OWNER	REVIEW PROGRESS	PROCESS OWNER
SPIN	FACILITATE PAT	TRACK MAN-HRS	TRACK IMPLEMENTATION		IMPLEMENT PROCESS
PAT	RE-ENGINEER PROCESS	TRAIN WORKFORCE	RECOMMEND CLOSURE		IDENTIFY PROCESS CHANGES

Getting Results

- **Completed Process Improvement Actions – 16**

- **In Progress – 2**

- **Planned – Unlimited**

- **Examples**
  - **Risk Management**
  - **Acquisition Planning**
  - **Training**
  - **Modification and Software Solicitation**

- **Working**
  - **Project Planning**
  - **Hardware Cost Estimation**

What We Didn't Do!

- **Didn't implement measurement & analysis immediately**
  - **All measurement viewed as "metrics" with little or no value added**
  - **Strong desire to make initial progress**
  - **Work load extremely heavy**
  - **Large number of trainees**

Need to Change!

- **SPO is primarily an acquisition and sustainment organization**

- **Software development/management not our primary responsibility**

- **Term "Software" turned off some people**

- **Needed First Line Supervisor support and commitment**

- **Needed a model to fit us, not us fit the model**

SEI to the Rescue
(Finding the CMMI
SW/SE/IPPD/A)

- **Developing several CMMI models**
- **Acquisition model in two draft forms**
  - **Staged (all PAs assessed)**
  - **Continuous (only PAs applicable to the organization assessed)**
- **Needed pilot organizations**

The CMMI SW/SE/IPPD/A Assessment

- **SPO served as Pilot organization**
- **Sponsored by Dr. Jack Ferguson**
- **First Air Force Unit assessed using CMMI model**
- **The assessment was based on the CMMI Continuous Model**
- **17 Process Areas were assessed**

Team Composition

- **Team needed balanced blend of skills**
  - **Model experts**
    - **Know the structure and intent of the model**
  - **Acquisition experts**
    - **Know how the SPO works**
  - **External & Internal members**
    - **Ensure a thorough, yet balanced assessment**

The Assessment Team

- Bonnie Bollinger   LY Team Leader   Software Management
- Millie Sapp   LY Lead Assessor   Software Management
- Mark Cavanaugh   SEI Team Member   Research Staff
- Carl Ruffin   LU Team Member   SPIN Program Manager
- Carol Thomas   LU Team Member   SPIN Program Manager
- Barbara Kirby   LU Team Member   Program Manager
- Al Lowas   LU Team Member   Engineering
- Merrill Billups   LU Team Member   Equipment Specialist
- Debbie Koenig   LY Team Member   Software Engineer
- David Dayton   STSC Lead Assessor   Software Engineer
- Steve Acuff   Team Support   Contractor Support

Assessment Objectives

- **Provide a pilot vehicle for the Acquisition PAs**

- **To assess the SPO acquisition capability using the CMMI as a reference model**

- **Measure our progress from previous assessments**

Assessment Scope

- **Interviewed 47 participants**
  - **Functional Area Representatives**
  - **Project Managers**

- **Reviewed 112 documents**

- **Spent 130 hours over 10 working days assessing the SPO**

Improvement?

- **2001 – SEI Assessed SPO against the CMMI Continuous model**

- **Included all 1997 PAs and new PAs**

- **All PAs Level 2 capability – Managed Process**

- **Organizational Process Focus rated Level 3 – Defined Process**

Improvement? (Cont'd)

- **Cost estimations more accurate**
- **Risk management more thorough**
- **Tech data more timely**
- **Money management more efficient**

So What?

- **Created a rallying point for improvement**
- **Assessed our core business practices/processes**
  - **Strengths and weaknesses**
  - **Laid out the path to world-class, benchmarked excellence**
  - **CMMI really worked for us**

So What? (Cont'd)

- **Energized and unified SPO leadership**
  - **Focused on continuous improvement**
  - **Established priorities and practices**
  - **Gave us a model tailored to us**
- **Pulled in people not involved in 1997 assessment**
  - **Better understanding of SPO acquisition capabilities and maturity**

Bottom Line!

- **Involvement with and use of CMMI could have prevented a $21M cost overrun if we had had level 3 capability measurement and analysis process in place**

- Worth every $ we spent on it!

Moving Forward

- **Implement measurement and analysis tools**

- **Further refine our processes**

- **Achieve next level of the CMMI for all PAs**

- **Identify more areas for improvement**

- **Set the standard for excellence**